Story by Kathy Wythe

Cooperating for Cleaner Water

The Leon River TMDL Process

The Texas Commission on Environmental Quality (TCEQ), working with a local stakeholder group and others in the Leon River Watershed, is developing a Total Maximum Daily Load, or TMDL, for bacteria, one of the first TMDLs for bacteria in the state.

In 2002, the TCEQ determined that the water quality for 44 miles of the Leon River between Proctor Lake and Lake Belton contained elevated bacteria concentrations that impair the water for contact recreation such as wading and swimming. This TMDL plan will budget how much bacteria pollution from point sources (like wastewater treatment facilities) and nonpoint sources (runoff from land) can occur in a single day and still maintain water quality standards.

Kerry Niemann, TCEQ project manager, said current estimates are that the impaired segment needs roughly 20 percent to 25 percent reduction to meet water quality standards for contact recreational use.

The federal Clean Water Act requires states to identify impaired segments of water on its 303(d) list (a list of water segments that do not meet water quality standards) and to develop a TMDL for each pollutant that impairs any segment, according to TCEQ documents. TCEQ has adopted 63 TMDLs with EPA approving 60 of those to date.

TCEQ contracted with James Miertschin & Associates to develop the Leon River TMDL. The company is using a water quality model to mimic the hydrologic conditions on the impaired segment of the river.

The Leon River Bacteria TMDL Advisory Group, which represents various interests in the watershed, has had five public/stakeholders meetings. More than 130 landowners attended a meeting in Comanche and more than 60 attended two meetings in Hamilton.

According to Bob Whitney, Comanche County Extension agent, “landowners are the key to developing and implementing this TMDL. In the last several meetings, we have seen tremendous participation by local citizens who want to understand and be a part of any watershed plans.

“They make their living here on the land and no one wants clean water more than they do. It is important for those of us in government to recognize that these landowners will be the ones who spend their own money to make this TMDL happen.”

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Researchers with the U.S. Department of Agriculture-Agricultural Research Service are collecting water quality data during run-off events on an impacted creek and a non-impacted creek.

Niemann said the TMDL report should be finalized by August 2006. After the TMDL is reviewed internally and a public meeting held, then the TCEQ commissioners and EPA will examine it for approval. Once the TMDL is approved, TCEQ will work with the stakeholder advisory group to develop an implementation plan to reduce the bacteria. An implementation plan outlines steps necessary to reduce pollutant loads through regulatory and voluntary activities, according to TCEQ's Web site.

For the nonpoint source pollution, different agencies and private interests will develop projects to help producers voluntarily reduce the nonpoint pollution.

Extension agents from all four counties affected by the TMDL will be working with TCEQ to involve agriculture producers and other interested groups in developing allocation and implementation plans, Whitney said.

The Texas Water Resources Institute (TWRI), Texas Cooperative Extension and U.S. Department of Agriculture-Agricultural Research Service (ARS) are already implementing a 319(h) project on the Leon River.

The project, The Impact of Proper Organic Fertilizer Management in Production Agriculture, will assess the effectiveness of best management practices using organic fertilizer and then will educate farmers on the proper use of organic fertilizers, such as animal manures.

According to Clint Wolfe, TWRI's manager of the project, researchers and Extension specialists will implement organic fertilizer management practices on cultivated and pasture fields to demonstrate the importance of using the correct method, timing and application rate. Extension will demonstrate the water quality difference between Resley Creek, an impacted water body, to Mustang Creek, a non-impacted creek.

For more information about the TMDL program, visit TCEQ's Web site at: www.tceq.state.tx.us/implementation/water/tmdl/ or TWRI's news article about TMDLs at: http://twri.tamu.edu/newsarticles.php?view=2004-05-07.

For the TWRI/Extension/ARS project, visit http://twri.tamu.edu/ipofm/.